Employability of Graduates in Higher Education Institutions: A Critical Review

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ABSTRACT:
The Ministry of Human Resources and Ministry of Higher Education Malaysia have allocated a huge budget to produce qualified, knowledgeable and highly skilled workers for academic, technical and vocational training to meet the requirements of a highly competitive job market. This budget is to ensure that the teaching method in the education and training sector is strengthened by tapping from the country's knowledge and innovative capacity. Hence, this paper seeks to identify the critical issues concerning the employability of graduates in the Higher Education Institutions. The methods used to achieve this objective is by rigorous overviewing of literatures on employability models, perception and meaning of employability, attributes of employability and the relationship of these issues with employability. The output of this review is the proposed conceptual model meant to address the critical issues of employability among graduates in Malaysia. The review also highlights the need for prelimninary study to be conducted so that most of the issues in the proposed model are clearly defined and addressed. It further envisaged that future research would provide an insight to the real issues of employablity and solution to address the unresolved Malaysian unemployment agenda.

Keywords: Employability, Higher Education Institutions, model, review and relationship

INTRODUCTION

Employability is often associated with a person being able to find a job, keep it and rotate between jobs or industries [1] [2]. A graduate can be employed based on inert values; ability, skills and knowledge which are valuable to the needs of an organization [1] [2]. In the current era of globalization, employers seem to be more focused on the ability of the employees to assimilate quickly, adapt to changes in the workplace and stand strong in the workforce [3]. Employability can also be meant by the ability to have the capacity to peform, to be willing and to stay attractive in the workforce, to be proactive and react to changes in responsibilities and the work environment [4]. On the other hand, employability was defined as the capability to navigate independently within the labour market to realize potential through sustainable employment. It further brings about the meaning of capability as a realized outcome of an individual's assets; skills, qualifications, personal attributes and the current labour market, the methods the assets are utilized and how they are presented to the employer [5].

A lot of graduates appear in the local employment market yearly, and this trend shows no sign of slowing down. Since end of 20th century, Malaysia has been facing the issue of rising graduate unemployment in spite of significant changes in the economy [6]. In 2006 alone, an estimate of 220 000 graduates joined the Malaysian workforce [7]. Total employment in the country is estimated to record an average growth of 1.9 per cent during the period 2006 until 2010, from 10.9 million in 2005 to 12.0 million employees in 2010 [7]. The labour force in 2010 decreased from 11.84 million (April) to 11.56 million (May). Likewise in 2011, the market stretched in July following the rise in employed force by 249 300 persons (2.1%) to 12.36 million while the number of unemployed decreased by 19 500 persons (4.9%) to 380 600. In contrast, the figure of unemployment rose by 13 400 persons (3.5%) to 394 000 persons and amounting to the increase of 0.1 percentage point in the unemployment rate to 3.1% in August. The unemployment rate remained at 3.1 per cent as compared to that obtained in the same month the preceding yea [8]. These figures include the contribution from the number of unemployed from the High Education Institutions HEIs graduates. The unemployment rates and status of these graduates is crucial in addressing the issue of employability in HEIs in Malaysia.

Employability in Higher Education Institution in Malaysia

The ministry of higher education (MoHE) has grown substantially and transformed the national education industry to an excellent regional and international hub for education [6][9]. In this regard, the increased public quest for tertiary education has stimulated the higher education market to be monopolistically competitive. Competition among the Public Higher Education Institutions (PUHEIs) and Private Higher Education Institutions (PHEIs) for same student enrolment become rampant in the higher education market [10].

In 2007, the aggregate number of graduates ranging from all levels of programs at the PUHEIs was 85 448 and an almost same number of 83 432 graduated from the PHEIs. In 2008, graduates from the public education was in the tune of 59 844, while those from the private HEIs were 26 590 [11]. Due to the fact that job availability in the market is limited, a substantial number of these graduates encounter challenge in finding employment [11]. The perception of most employers on the issues of unemployment in HEI graduates is because they are found wanting in some specifics skills and inadequate work-related competencies [6].

Employability of Graduates - Is It a Growing Issue?
The Ministry of Human Resource (MHR) has implemented the blueprint for Malaysian Occupational Skills Development and Training (MOSDT) for 2008 – 2020. The plan is to ensure a qualified, knowledgeable and highly skilled Malaysian work force which is ready to face the current competitive economic environment [7]. There are many challenges faced by both the industry and the government in developing skillful employees. The industry's challenges are skills mismatch, less competent workers and stressing less on core work skills such as team work, problem solving, business acumen and the ability to learn. While government challenges emanate from the totality of human resources pertaining to knowledge, skills and positive attitude [7]. Among the factors of unemployment among graduates are: unwillingness of the graduates to join the workforce, lack of employability or relevant skills and lack of competencies or capabilities required by employers and lastly, the current economic challenges and globalisation forced the industries'employers to seek for competent and skilfull employees [12].

The survey done by the Ministry of Education shows that unemployment among 2010 graduates was rather alarming. Figures from Table 1 show that out of the 21 734 graduates, 78.9 percent have difficulties finding a job, while 0.8 percent of these graduates have low self-esteem to compete in the workforce [13].

Table 1 indicates the unemployement reasons for graduates in the various HEIs. From this table, finding jobs is the main reason for unemployment, followed by, job enrolment, and the least is that graduates who are not interested in work, and others.

Table 2 shows the scenario of 2010 unemployed graduates based on the main programs offered at the various HEIs. It is rather alarming that most of the unemployed graduates in the different HEIs are from the arts and social sciences program. It closely indicates that job opportunities for this program is much less as compared to other programs like technical, information technology, communication and education. What is also very interesting was that the HEIs education program had amazingly the least percentage (2.3%) of unemployed graduates. It seems that in 2010 alone, the education sector requires a high number of graduates to fill up vacant positions.

REVIEW OF LITERATURE
In the context of the PUIE's, many models were introduced to address the issue of employability among graduates in both the PUHEIs and PHEIs. These models provided the description of the prominent employability attributes; skills, competencies, knowledge and individual learning. These attributes were described in the [5], USEM [14] and CareerEDGE [15] models. The three (3) main models of employability will be discussed in this paper.

MODELS OF EMPLOYABILITY
Hillage and Pollard Employability Model (1998)
[5] defined employability as the competency of a person to attain initial employment, maintain it and to obtain new employment if required. By this definition, four (4) main constituents were derived as; employability assets, deployment, presentation and job getting skills. The employability assets are made up of knowledge, skills and attitudes, personal affairs as family responsibilities or external elements as current opportunities in labor market. Deployment consists of career management skills and employment searching skills. The presentation and obtaining employment skills is the ability to prepare resume, work experience and interview tactics [5]. Below is the figure depicting employability relationship with assets, deployment, presentation, and job attainment skills.

Yorke and Knight USEM Model (2004)
[14] used their Understanding, Skills, Efficacy beliefs and Metacognition (USEM) model to define employability. The model also allows individuals to organize their complex career development into four (4) inter-connected elements of employability. The components are understanding, skills, efficacy beliefs and metacognition. Basically, the model described employability as the process of achieving metacognition from the premise of understanding first. Then, developing skills from understanding where efficacy beliefs play an immediate role to ensure metacognition is achieved.

CareerEDGE Model

CareerEDGE Model as seen in Figure 4 depicts the components of employability and shows the direction of interaction between the various elements at different levels of the model. The model starts off with the five components at the lower tier. These components which are career, experience, courses, generic skills and emotional intelligence of the employee provide the opportunity to leverage and develop fully on this lower level. The reflection and the evaluation of these components allow the development in the next higher level. This particular level consists of self-efficacy, self-confidence and self-esteem of the person which is directly linked with the next level which is employability. Thus, the existence of development learning related to career, work and life related to experience, degree as course knowledge, skills and understanding, generic skills with emotional intelligence stood as the foundations of employability [15].

ESSENCE OF PERCEPTION & MEANING OF EMPLOYABILITY

[16] defined employability as the least required elements to develop skill levels or competencies needed by school leavers and graduates to join the labour market. From the employer's perspective, employability is concerned with a person's ability to possess some soft skills and personal attributes; loyalty, commitment, enthusiasm, reliability and adaptability, including relevant and well versed in technical competencies [17]. Most employers are more likely to employ an individual with a ready set of abilities such as competencies, skills, knowledge and personal attributes. Employing this type of individual will make the company more competitive in the market place [18]. The term employability can be defined differently and broadly in different studies. It encompasses the different versions and perceptions of individual and organization in the workforce. Table 3 describes the several definitions of employability within the context of human resource and business related sectors.

The deliberation of the different models and definition (Table 3) of employability mapped out various definition, perceptions and meanings of employability. These perceptions can thematically be divided into five categories. These categories are employability skills, competencies, knowledge, individual learning and personal development competencies. These categories are discussed the subsequent sections.

CATEGORIES OF EMPLOYABILITY
Employability Skills
Employability skills are not work specific, instead are skills which cut horizontally across all industries and vertically across all jobs from basic entry level to the level of chief executive officer [27]. Employability is also related to maintaining, updating skills and experience across all industry sectors [28]. The skills assimilated by employees during their work career can be categorized into two broad skill types; technical and non-technical [27][28]. Technical skills are skills that are basically needed for competent performance within a specific and relevant particular discipline, such as information technology or psychology in the organization's operations and management. In contrast, non-technical skills are skills that can be pertinent in several jobs or professions, which are the basic skills in employability. Most employees receive these skills from experience and knowledge on certain activities; learning and strategies skills, problem solving, decision making and emotional skills [29].

Competencies
In the current business environment, employers find it rather difficult to sustain and generate competencies among their employees. The reasons are that managers of organization are continuously faced with rapid changes in technology, business competition, current competencies-based learning and skills development [30]. In view of the dynamism of business globalization, competencies can be developed through assessing an employee's skills and performance. The employer can managerially measure their employees' competencies through the organization's training and exercise [31].

Knowledge
In advanced economies, knowledge is considered to be the principal factor of employability and is a term widely used to indicate the relationship between employability, skills, competencies and personal learning economies. Knowledge assists the employees in examining the incoming abilities and skills that they should learn for their career and development [32]. Knowledge can be categorized into two types; tacit and explicit.

Individual Learning
This individual learning is regarded as an indispensable tool for a person to deal with current and emerging challenges in education or the enterprise sector [33]. In order words, learning has been defined as the method by which a person receives knowledge and skills, creating possible attitudes and opinions, and thus acts professionally. It is part of the branch of cognitive psychology, together with areas like the senses, reasoning and memory [34]. Individual learning brings about economic development to the environment, by

which, technical knowledge and skills of employees are required at the workplace [35].

Personal Development Planning (PDP)

Personal Development Planning (PDP) is advancement in personal, educational and career by achieving through performance. However, in the business context, PDP is defined as a process through which a person schedules a training and development plan. Such a plan allows the individual to take the responsibility in the job [36]. The primary objective of PDP is to enhance the capacity of individuals to assimilate what and how learning is to be conducted. It can be performed by evaluating and planning, by taking the responsibility for their own learning, supporting students to become more effective, independent and confident self-directed learners [37].

PROFOUND LINKAGES OF EMPLOYABILITY

There are profound linkages between employability and its factors; attributes or components that impacts and influence employability. The factors of employability extracted from the previous literature review encompass the issues related to employability skills, competencies, knowledge, individual learning and PDP. The issues related to these factors are deemed to have direct and indirect relationships with employability.

Employability Skills Enhance Graduate Employability

There is direct relationship between employability skills and employability. As known, employability skills are the basic skills such as communication, presentation and practical skills which are included in the curriculum implemented at higher institutions of learning. Acquiring these skills is relevant to the market needs and one of the ways to enhance graduate employability [38]. These are the value-added skills that employers require of graduates before they are employed. In Malaysia, employers chose more often to select graduates from public universities which have employability skills [39]. The prevalent dilemma of employability is the imbalances existing between the graduate's skills and the skills and qualification expected by the employer [40]. This mismatch has aggravated the current potential position of graduates' employability.

Issues on Competencies Influencing Employability

Both personal and organizational competencies are directly related to employability and can be achieved through industrial and commercial training on individual characteristics with competencies that

will be recognized by the employers [41]. These competencies will impact the organization performance once these graduates are employed. One of these specific competencies is the creative industries which is necessary to the economic growth as well as social and cultural status of a country. Graduates with creative competencies will somewhat find difficulty to establish professionally. However, early successful careers can be significantly driven by the individual career management ability and innate work motivations [42]. The personal traits of these attributes include creativity, responsibility, initiative, determination and confidence [43].

Relationship of Knowledge with Employability

Knowledge is a developing process that is mostly reliant on tacit or unconscious processes working co-dependently with explicit knowledge [44]. Knowledge has close relationship with employability. Now, the circumstances surrounding the future employability proposed ecology as a representation for the way in which learning is interwoven in a complex environment that incorporates a few concepts. The setting of the concepts is the learner, the workplace, the external company environment and the knowledge repositories [45]. Knowledge can be utilized and transferred through intensive and extensive contact relationship between group members in the organization.

Evidence of Relationship between Individual Learning and Employability

Positive correlation exists between worker-perceived organizational learning in a workplace on performance; transformational leadership, organizational learning and person's performance which have significant influence on the team. Employability may be deemed only as an individual phenomenon; and at team level, the impact of transformational leadership on performance are mediated by organizational learning capability [46].

Personal Development Planning and Employability

The PDP usage as already adopted and executed immensely by various universities and firms where it mostly connected to lifelong learning and continuing professional development [47]. There are two widely adopted orientations in PDP where one of it is focused on enhancing students' abilities in their education [48]. Another one is contributing knowledge aimed at supporting students' struggles in the post-studying period in order to enter the firm [49]. Strong correlation exists between PDP and employability and graduate employability. This correlation is focal to the development of students'

ability to establish, express vividly and the evidence of learning and overall development. Both PDP and work supported graduate employability emphasized on the concept of sustainable employability [37].

CONCEPTUAL MODEL
Based on the review of literatures which was conducted, these issues are raised through the main

employability models, the perception and definition of employability, categories and attributes of employability, and the profound linkages of employability. The relationship among the issues of employability raised with employability per se is also brought forth and summarized in Table 4.
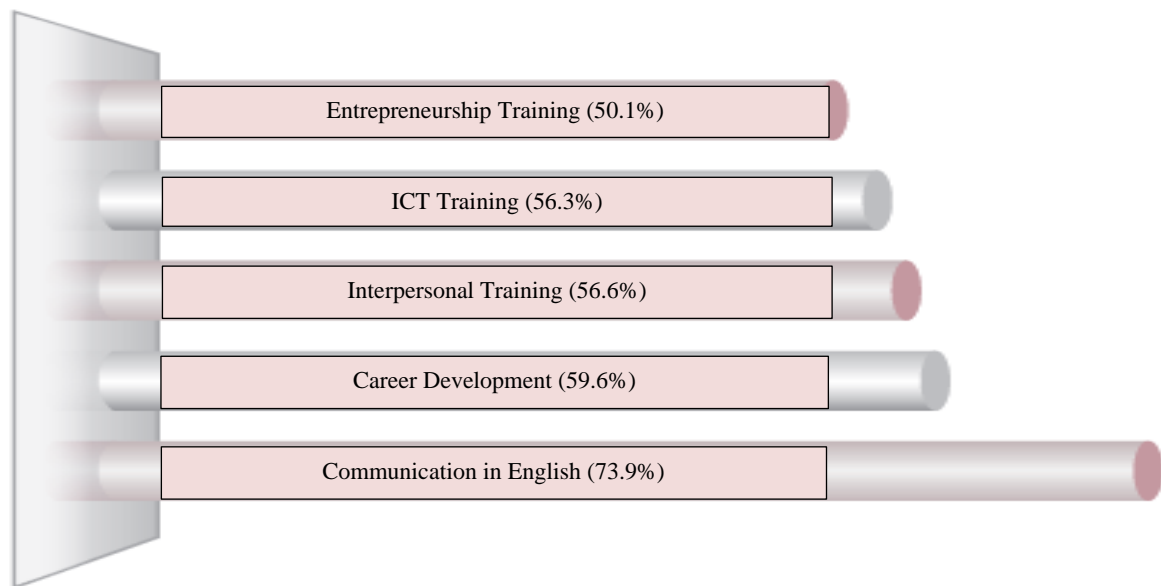

Figure 1: Additional Training Needs for Unemployed Graduates, 2010 (Source: [13])

Table 1: Graduate's Unemployment Reasons based on PUEIs 2010 (Source: [13])

Unemployment Reasons	IPTA	IPTS	Polytechnics	Community Colleges	Training Institutions under KSM	Total
	(n=21,734)	(n=9,356)	(n=9,453)	(n=2,370)	(n=42)	
Finding job	78.7	71.6	58.4	57.8	81.0	71.5
Job enrolment	8.7	13.4	33.1	28.3	2.4	16.2
Resting at home	3.4	5.6	1.5	2.5	2.4	3.4
Family responsibilities	2.7	1.8	2.5	3.3	2.4	2.5
Unsuitable jobs	1.9	2.7	1.6	2.6	9.5	2.1
Low self-confidence	0.8	0.7	0.5	0.9	None	7.0
Choice to not work	0.4	0.6	0.4	0.9	None	0.5
Health reasons	0.4	0.3	0.5	0.8	None	0.4
Not interested	0.3	0.3	0.2	0.8	None	0.3
Others	2.0	3.0	1.3	2.0	2.4	0.3
Total (%)	**100**	**100**	**100**	**100**	**100**	**100**

Table 2: Unemployed Graduate based on Main Program, 2010 (Sources: [13])

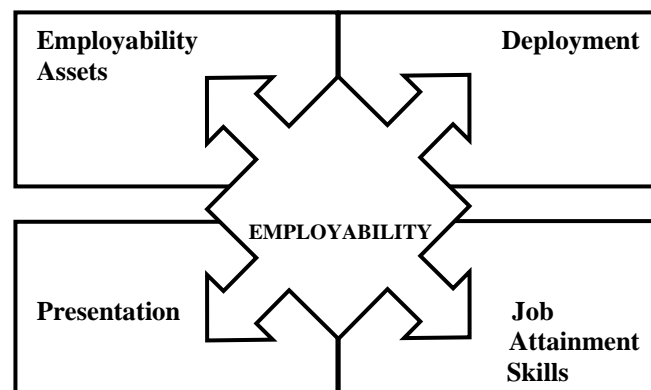| Main Program	PUHEIs	PHEIs	Polytechnics	Community Colleges	Training Institutions under KSM	Total
	(n=21,734)	(n=9,356)	(n=9,453)	(n=2,370)	(n=42)	
Arts and Social Sciences	52.4	45.3	27.2	38.4	None	44.5
Technical	19.2	23.5	None	None	None	14.8
Information Technology	20.4	14.1	64.7	40.1	100	29.9
and Communication	5.5	12.4	8.1	21.5	None	8.5
Education	2.6	4.7	None	None	None	2.3
Total (%)	**100**	**100**	**100**	**100**	**100**	**100**

Figure 2: Hillage and Pollard Employability Model [5]
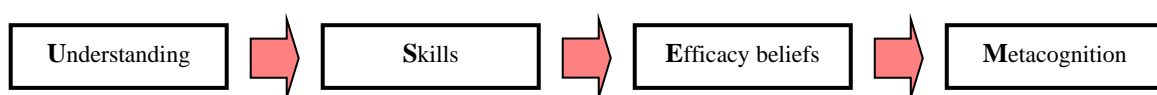
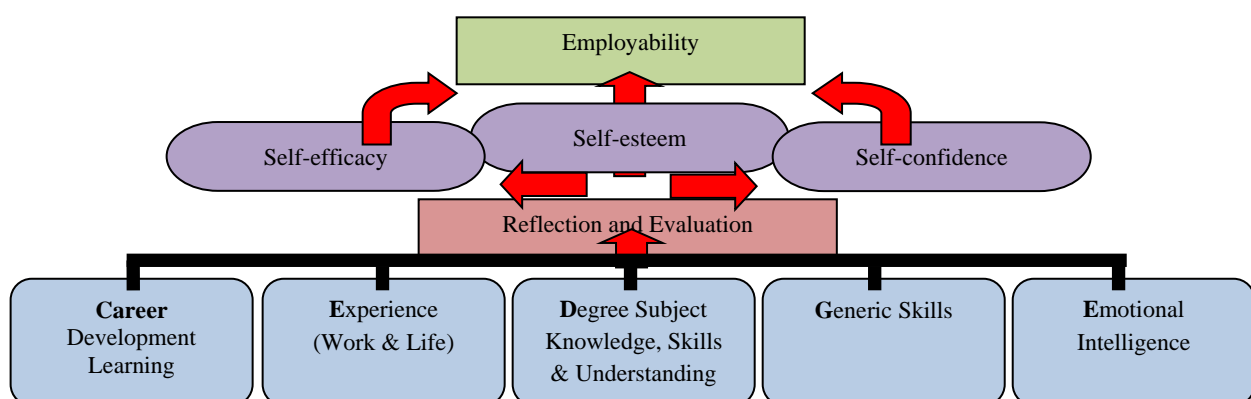**Figure 3**: USEM Model [14]

Figure 4: CareerEDGE Model [15]

Table 3: The Definitions of Employability

Definitions	Author
An employee's increased values of internal and external labour markets.	[19]
Capability of obtaining and keeping fulfilling work and to navigate self-sufficiently within the labour market to realize potential through sustainable employment.	[5]
Employability contrary to employment security is what is deemed as the new form of psychological contract between employer and employee.	[20]
An individual's ability to get a job and move between jobs and/or industries in occurring circumstances.	[1][2]
Capacity, willingness to be and maintain attractiveness in the labour market, by being proactive to foresee changes in tasks, work environment and reacting to these changes.	[4]
A psycho-construct embodying individual characteristics that facilitate adaptive behavior necessary to remain employable.	[21]
A continuous accomplishing, obtaining or creating of work through the optimal use of competencies.	[22]
A person's perception which reflects the perceived possibility of obtaining (new) employment.	[23]
It depends on personal circumstances and a person's capacity for job flexibility and mobility.	[24]
A collection of skills, knowledge and personal attributes that make a person more likely to successfully obtain and opt for an occupation that benefit themselves, the workforce, community and economy as a whole.	[18] &[25]
The feasibility of striving in the internal or external labour market.	[26]

Table 4: Issues of Employability and Employability

Element	Findings			Authors
Employability				
Definition	Defined as capability of an individual to get, maintain and find new employment.			[5]
	Employability as a minimum requirement to induce skill levels or competencies needed by school leavers and graduates to join the labour market.			[16]
	Employees can possibly survive and increase values of internal and external labor markets.			[19][26]
	Having a set of skills, knowledge and personal attributes likely to secure and be successful in their chosen occupation.			[25][18]
	An individual perception which reflects on the perceived possibility of obtaining (new) employment.			[23]
Elements (Hillage and Pollard Model)	1)	Employability assets: Knowledge, skills and attitudes, personal circumstances and external factors		[5]
	2)	Deployment: Career management and job search skills		
	3)	Presentation: Prepare CV writing and work experience		
	4)	Job getting skills: Interview technique		
Component (USEM Model)	1)	Achieving metacognition from premise understanding.		[14]
	2)	Developing skills from understanding		
	3)	Efficacy beliefs play an immediate role to ensure metacognition is achieved		
Element (CareerE	1)	Reflection and Evaluation: Career, experience, course, generic skills and emotional intelligence.		[15]

dge Model)	2)	Employability: Self-efficacy, self-confidence and self-esteem	
Tiers	1)	Lower tier: Reflection and Evaluation	[15]
	2)	Higher tier: Employability	

Skills

Definition	Employability skills are not job specific, rather it can spreads flat across all industries and vertically across all jobs from the down level to the top level of management.	[27]
Categories	1) Technical skills: Skills that are necessary for competent performance within a specific and relevant particular field such as information technology or psychology in the organization's operations and management	[27]
	2) Non-technical skills: The basic skills that employees received from the experience and knowledge on certain activities; learning and strategies skills, problem solving, decision making and affective skills	[29]

Competencies

Definition	Characteristics of an individual-causally related to effective job performance.	[50]
	Employee's skills that are needed to transfer learning from the classroom to the workplace.	[51]
	Human capabilities that are needed for effective job performance requirements.	[52]
	Experiences and knowledge, skills, characteristics, aspects of personality or social role, values and behavior acquired during lifetime.	[53]
	Provide organizations in attitudinal ways what their leaders are required to do to bring about the outputs and culture the organization desires.	[54]
	Requires skills, competencies, knowledge and other traits required to perform job.	[55]
Attribute	Success skills transfer learning, individual mindsets, underlying characteristics of individual, human capabilities, sum of experiences and knowledge and capacity to mobilize diverse cognitive resources.	[50][51][54][56]

Knowledge

Definition	Knowledge assists the employees in examining the incoming abilities and skills that they should learn for their career and development.	[32]
Types	1) Tacit: Knowledge which cannot explicitly represent the learning and experiences gathered by individuals (how to ride a bicycle, knead bread and use a word processor).	[57][58][59]
	2) Explicit: Knowledge refers to the articulation and verbalization of systematic and objective, rational and logical, digital, sequential from the past and free context.	[58]

Individual Learning

Definition	Process through which an individual acquires knowledge and skills, creating possible attitudes and opinions and profession.	[34]
Attribute	Contributed directly through its technical knowledge and skills where it can be seen as an inner psychological interpretation process which involves social interaction within the individual exclusively in a social process. It also belongs to the field of psychology, together with areas like the sense, reasoning and memory.	[35][34]

Personal development planning (PDP)

Definition	The original guidelines on progress files as the process where an individual is structured and supported through reflecting upon self-learning their own learning plan.	[60]
	Process through which the individual prepares a training and development plan	[36]
Attribute	PDP aspires to form an intermediary stage, provide opportunity for students to develop skills, understand what and how to conduct, become more effective, independent, confident self-directed learners, achievement, stimulates a positive behavior towards long life learning, enlightened graduates with autonomous, self-directed and flexible lifelong learners.	[61][62][49][37][63]

Linkages of Employability

Skill and Employability	There is direct relationship between employability skills and employability. Employability skills are the basic skills such as communication, presentation and practical skills.	[38]
Competencies and Employability	Employability is focal to an employee performance and organizational success, individual employability includes general meta-competence and context-bound competence that is related to a specific profession and organization.	[64]

Knowledge and Employability	The reappraisal of relationships and prophecies in the current knowledge-based economic climate, the success of an organization is inextricably linked to the individual and employability at work place which impacted future employability.	[45]
Learning and Employability	Employability can be considered only as an individual phenomenon; and at the group level, the effects of transformational leadership on performance and organizational learning capability.	[46]
PDP and Employability (MV)	A strong relationship between PDP and student employability which supported graduate employability emphasizing on the concept of 'sustainable employability'.	[37]

From the summary presented in Table 4, the issues of encircling the employability of graduates of HEIs' can be translated in the form of a proposed conceptual model as indicated in Figure 6.
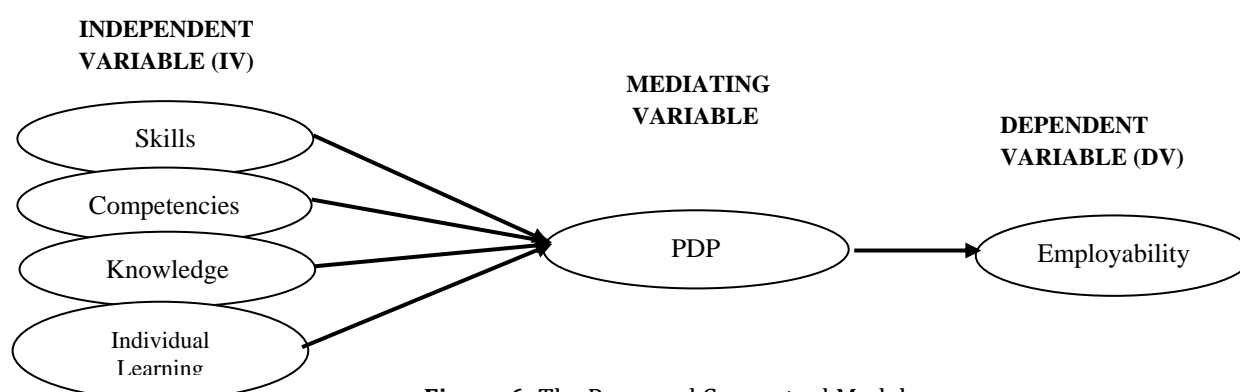

Figure 6: The Proposed Conceptual Model

This model proposes the factors that affect employability among graduate students. It is expected that this model reveals the relationships among graduate which are influential factors; employability skill, competencies, knowledge, individual learning and PDP which are relevant elements or components in the workforce. These factors are envisaged to provide several impacts on the perceptions toward the graduate employability in the workforce. More succinctly, this proposed employability model is structured in an attempt to identify and subsequently highlight gaps for further research.

CONCLUSION
This paper has brought forth the proposed model to address the issue of employability of graduates in Malaysian HEIs both the PUHEI and PHIEs. The rigorous reviews of literatures have established that there are several factors or attributes and components that contribute to the employability of graduates. These factors are the issues which directly or indirectly influence the employability of students once they graduate from the HEIs. One of the issues that affect employability directly or indirectly is the presence of the Personal Development Planning (PDP). Is PDP the mediating or moderating variable as mentioned by [65]?

Perhaps, the presence of PDP or other factors observed in this study may also mediate and moderate the employability of the graduates in HEI's.

Notwithstanding what is discussed in this paper, the employability of graduates in HEI's is based only from the critical review of literatures. The real issues of employability of graduates in the HEI's in Malaysia could be addressed through preliminary study. Therefore, it is proposed that preliminary study should be conducted with the appropriate research methodology which can provide the information and assist in determining the real issues of employability. It would also seem relevant and timely that the preliminary study would provide many pertinent insights to the proposed employability model that could an eye opener to some of the unresolved Malaysian unemployment agenda.

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